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Marinus F. J. Evers

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EXAMINER

LIU, XUE H

ART UNIT

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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,529	Applicant(s) EVERS ET AL.	
	Examiner XUE LIU	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Amendment to the claims filed on 12/17/08 is acknowledged. Currently, claims 1-23 are pending. Claims 1-20 are currently amended. Claims 21-23 are new.

Election/Restrictions

2. Applicant's election with traverse of claims 11-21 and 23 in the reply filed on 12/17/08 is acknowledged. The traversal is on the ground(s) that the special technical feature of Groups I and II is taught in the prior art. Specifically, applicant argues that EP 0971401 does not teach regulating and adjusting the distance between the two mold halves while the two mold halves are moved towards each other and while the two mold halves are held in a position after having been moved towards each other during curing of the compound. Applicant further argues that the inventions of Groups I and II should be examined together since they are related as method and apparatus for carrying out the method. This is not found persuasive because WO 01/87569 teaches a control device 23 (shown in fig. 1) for controlling actuators 9 so that the distance between the two mold halves 2, 3 can be continuously regulated and if desired, adjusted during the two mold halves 2, 3 being moved towards each other and during the two mold halves being held in a position when moved towards each other (page 5, lines 27-33). Therefor the examiner has shown that the special technical feature of Groups I and II is taught in prior art. Furthermore, the relation of Groups I and II as method and apparatus for carrying out the method cannot be the basis for examining the inventions together since the lack of unity of invention is clearly present between the inventions of Groups I and II as established above.

The requirement is still deemed proper and is therefore made FINAL.

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3. Claims 1-10 and 22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12/17/08.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the compound reservoir that is connected to the inkjet head must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

5. Previous objections to claims 11-20 are withdrawn in view of the amendments to the claims to remove the multiple dependencies of the claims. Applicant traverses the objections as being improper and states that claims 11-20 should have been previously examined. Applicant states that claim 11 and claims 12 and 13 depending from claim 11 were proper when previously presented. However, claim 11 was a multiple depending claim that depended from another

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multiple depending claim (claims 3, 6, 9) and claims 12 and 13 were properly objected as depending from an improper multiple dependent claim. Applicant also argues that while claims 14-20 might have been in improper form, the claims should have been further treated on the merits. However, MPEP 608.01 (n) clearly states that a multiple dependent claim which depends from another multiple dependent claim should be objected to by using form paragraph 7.45 and not treated on the merits. Therefore claims 11-20 were properly treated in the previous office action.

Claim Rejections - 35 USC § 112

6. Previous rejection to claims 11-13 are withdrawn in view of amendments to the claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 11-17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima (EP 0971401) in view of Kok et al. (WO 01/87569).

Regarding claim 11, Miyajima teaches an apparatus for completely or partly covering at least one electronic component 16 with a compound 34a comprising: a first mold half 21; a second mold half 20, wherein the first mold half 21 is moveable relative to the second mold half 20 (col. 13, lines 3-5 and fig. 14), a cavity 26, being defined by the two mold halves, configured to receive the electronic component 16 (shown in fig. 2), at least one actuator 86, 87 (fig. 13) connected with the first mold half 21 and configured to regulate the position of the first mold

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half 21 relative to the second mold half 20. Miyajima does not teach a controller configured to control the positions of the at least one actuator. However, Kok et al. teach a control device 23 (shown in fig. 1) for controlling actuators 9 so that the distance between the two mold halves 2, 3 can be regulated and, adjusted while the two mold halves 2, 3 are moved towards each other and while the two mold halves are held in a position after having been moved towards each other (page 5, lines 27-33). It would have been obvious to one of ordinary skill in the art to provide the control device as taught in the specification of Kok et al. in the apparatus of Miyajima since the control device enables dynamic operation of the actuators so that the distance between the mold halves can be adjusted during molding operation which is useful for molding products with uneven surfaces (page 5, lines 27-33 to page 6, lines 1-4, and page 6, lines 12-14 in the specification of Kok et al).

Regarding claim 12, Kok et al. further teach that the controller is configured to hold the two mold halves 2, 3 at a small distance from each other in the position so that a certain position control range is maintained (page 6, lines 12-14).

Regarding claim 13, Miyajima teaches a component supply and discharge device (release film 40 in fig. 14) capable of placing and removing an electronic component 16 (see fig. 2) on or from mold half 21, respectively.

Regarding claims 14-15, Miyajima teaches a film supply and discharge device 80a, 80b, 82, 84 configured to supply film to the mold cavity and discharging film from the mold cavity (see fig. 13).

Regarding claim 16, Miyajima teaches a compound supply provision (see paragraph 61).

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Regarding claim 17, Miyajima teaches that the compound supply provision is configured to supply the compound 50 to the mold cavity when the mold halves are in the position when moved towards each other (paragraph 54, 61 and fig. 13).

Regarding claim 23, Kok et al. teach that the controller 23 is configured to continuously regulate the positions of the at least one actuator 9 (page 5, lines 27-33).

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima in view of Kok et al. as applied to claim 16 above, and further in view of Miyajima et al. (2002/0015748).

Regarding claim 18, Miyajima teaches that an electronic component 16 which is placed on a mold half 20 is configured to place on the compound 34, 50 (see figs. 1-2, 5-7, 10-13). Miyajima does not teach that the compound supply provision is configured to place the compound on an electronic component which is placed on a mold half. However, Miyajima et al. teach that a compound 50 is placed on an electronic component 16 which is placed on a mold half 23 (paragraph 57 and figs. 1-12). It would have been obvious to one of ordinary skill in the art to modify the apparatus of Miyajima with the teaching of Miyajima et al. to place the compound on an electronic component instead of placing an electronic component on the compound since it has generally been recognized that to shift locations of parts when the operation of the device is not otherwise changed is within the level of ordinary skill in the art, *In re Japikse*, 86 USPQ 70; *In re Gazda*, 104 USPQ 400.

10. Claims 19 & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima in view of Kok et al. as applied to claim 16 above, and further in view of Dupuis et al. (US 5,685,898).

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Regarding claims 19 and 21, Miyajima does not teach that the compound supply provision is configured to place the compound on an electronic component present outside the mold cavity. Miyajima also does not teach that the compound supply provision comprises an inkjet head and a compound reservoir connected to the inkjet head. However, Dupuis et al. teach a method of applying polymeric resin on a substrate by means of an ink jet connected to an ink reservoir which is to be subsequently cured (col. 7, lines 40-45 and col. 8, line 59-col. 9, line 2). It would have been obvious to one of ordinary skill in the art to provide the teaching of Dupuis et al. in the apparatus of Miyajima since using an ink jet head allows selective deposition of resin on a substrate so that a desired pattern may be formed on the substrate. It would have been obvious to one of ordinary skill in the art to perform the compound supply step with the ink jet head either inside the mold cavity or outside the mold cavity since it has generally been recognized that to shift locations of parts when the operation of the device is not otherwise changed is within the level of ordinary skill in the art, *In re Japikse*, 86 USPQ 70; *In re Gazda*, 104 USPQ 400.

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima in view of Kok et al. and Miyajima et al. as applied to claim 18 above, and further in view of Dupuis et al. (US 5,685,898).

Regarding claim 20, Miyajima does not teach that the compound supply provision comprises an inkjet head and a compound reservoir connected to the inkjet head. However, Dupuis et al. teach a method of applying polymeric resin on a substrate by means of an ink jet connected to an ink reservoir which is to be subsequently cured (col. 7, lines 40-45 and col. 8, line 59-col. 9, line 2). It would have been obvious to one of ordinary skill in the art to provide the

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teaching of Dupuis et al. in the apparatus of Miyajima since using an ink jet head allows selective deposition of resin on a substrate so that a desired pattern may be formed on the substrate. It would have been obvious to one of ordinary skill in the art that the compound supply step with the ink jet head may take place either inside the mold cavity or outside the mold cavity since it has generally been recognized that to shift locations of parts when the operation of the device is not otherwise changed is within the level of ordinary skill in the art, *In re Japikse*, 86 USPQ 70; *In re Gazda*, 104 USPQ 400.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to XUE LIU whose telephone number is (571)270-5522. The examiner can normally be reached on Monday to Friday 9:30 - 6:00 EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip Tucker can be reached on (571)272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. L./

Examiner, Art Unit 1791

*/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791*